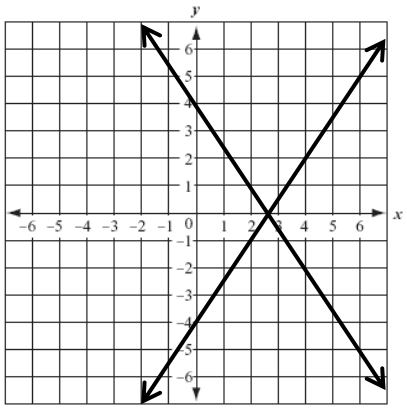
Advanced Algebra II Ch3 Test (80pts)

Name: _____

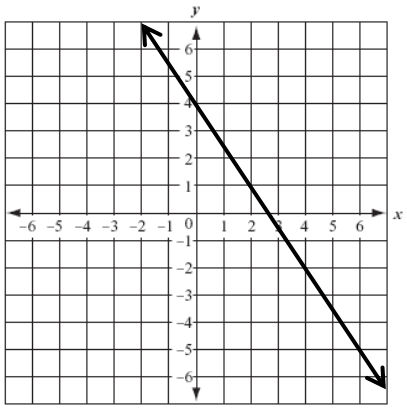
Date: _____ Pd:_____

1. Match each system to the graph by drawing a line, then label each graph by circling the proper name(6)

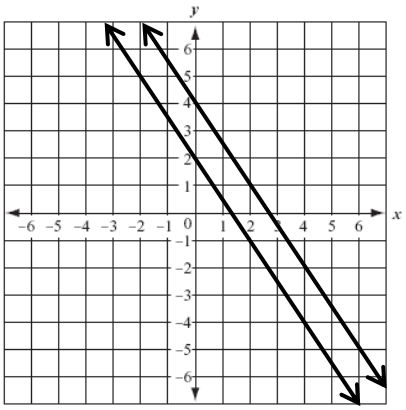
$\begin{Bmatrix} 3x+2y=8 \\ y=4-\frac{3}{2}x \end{Bmatrix}$ $\begin{Bmatrix} 3x+2y=4 \\ y=-\frac{3}{2}x+4 \end{Bmatrix}$ $\begin{Bmatrix} 3x+2y=8 \\ y=\frac{3}{2}x-4 \end{Bmatrix}$



Dependent/Independent/Inconsistent



Dependent/Independent/Inconsistent

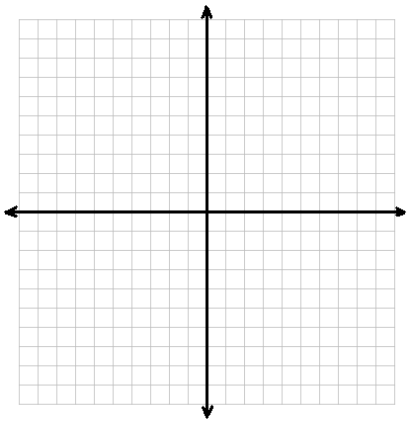


Dependent/Independent/Inconsistent

2. Solve this system by graphing(5):

$\begin{Bmatrix} x+y=-9 \\ y=3x+7 \end{Bmatrix}$

Solution: (,)



3. Solve this system(5): (,)

$\begin{Bmatrix} 4x+5y=53 \\ 7x+2y=59 \end{Bmatrix}$

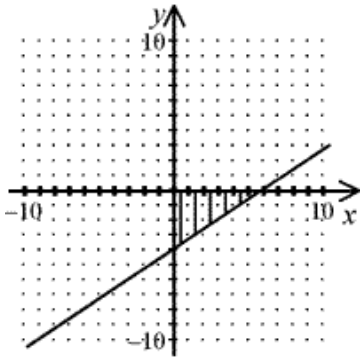
4. Solve this system(5): (,)

$\begin{Bmatrix} 5x-2y=-15 \\ y=3x+15 \end{Bmatrix}$

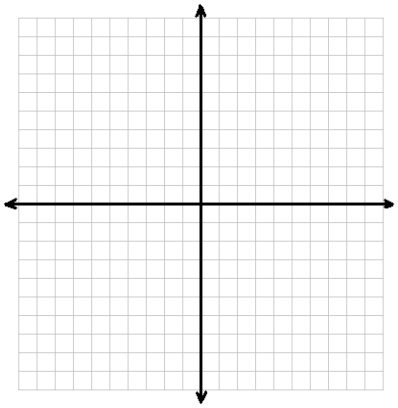
5. Circle the point(s) that are solutions to this system of inequalities(6): $\begin{Bmatrix} y > 2x - 1 \\ y \leq -3x + 9 \end{Bmatrix}$

(1, 2) (2, 4) (2, 3) (0, 1) (4, -3)

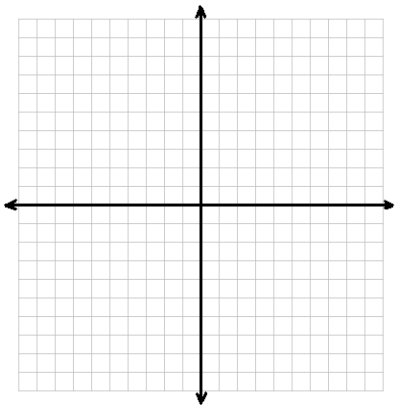
6. Write a system of inequalities for the graph shown(5):
Hint: x-int = 6 and y-int = -4



7. Graph this system of inequalities(5):
$\begin{Bmatrix} y \geq 2x + 5 \\ y < |x - 5| - 3 \end{Bmatrix}$



8. Graph this system of inequalities(4):
$\begin{Bmatrix} y \geq x + 7 \\ y > -2x + 3 \end{Bmatrix}$



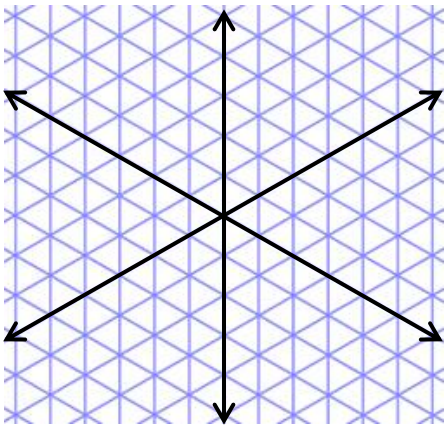
9. Solve this system of equations(6):
$\begin{Bmatrix} -x - y + z = -4 \\ y = 2x \\ 3x + y - 4z = -5 \end{Bmatrix}$

10. A 10-lb mixture of peanuts, cashews and raisins sells for $14. Peanuts cost $1 per pound, cashews cost $2 per pound, and raisins cost $1.50 per pound. The weight of peanuts in the mixture is twice the weight of cashews in the mixture. How many pounds of **each** ingredient is in the mixture(8)?

11. (4)What are the *x*, *y*, and *z*-intercepts of the plane with the equation $x + 2y - z = 6$

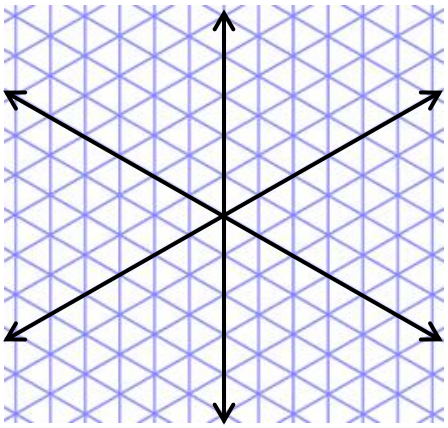
12. Graph the equation(4)

$4z - 2x - 3y = 12$



13. Plot the point(3)

(–3, –1, 2)



~Bonus~

Solve this system of 4 variables!

$$w - 2x + 3y + z = 3$$
$$2w - x - y + z = 4$$
$$w + 2x - 3y - z = 1$$
$$3w - x + y - 2z = -4$$